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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>(21) International Application Number: PCT/US99/08024</p> <p>(22) International Filing Date: 13 April 1999 (13.04.99)</p> <p>(30) Priority Data:</p> <table style="width: 100%;"> <tr> <td style="width: 33%;">09/061,833</td> <td style="width: 33%;">16 April 1998 (16.04.98)</td> <td style="width: 33%;">US</td> </tr> <tr> <td>09/096,560</td> <td>12 June 1998 (12.06.98)</td> <td>US</td> </tr> </table> <p>(71) Applicant (for all designated States except US): AMERITECH [US/US]; 2000 W. Ameritech Center Drive, Hoffman Estates, IL 60196-1025 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): BOSSEMEYER, Robert, W. [US/US]; 41W091 Colson Drive, St. Charles, IL 60175 (US). LIEBRECHT, Donald, B. [US/US]; 2436 Smalley Court, West Dundee, IL 60188 (US). BENNETT, Raymond, W., III [US/US]; 26 North Webster Street, Naperville, IL 60540 (US). SULLIVAN, Barry, J. [US/US]; 3539 Long Grove Road, Long Grove, IL 60047 (US).</p> <p>(74) Agent: HALLING, Dale, B.; Suite 202, 128 S. Tejon, Colorado Springs, CO 80903 (US).</p> </td> <td style="width: 50%; vertical-align: top;"> <p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p> </td> </tr> </table>			<p>(21) International Application Number: PCT/US99/08024</p> <p>(22) International Filing Date: 13 April 1999 (13.04.99)</p> <p>(30) Priority Data:</p> <table style="width: 100%;"> <tr> <td style="width: 33%;">09/061,833</td> <td style="width: 33%;">16 April 1998 (16.04.98)</td> <td style="width: 33%;">US</td> </tr> <tr> <td>09/096,560</td> <td>12 June 1998 (12.06.98)</td> <td>US</td> </tr> </table> <p>(71) Applicant (for all designated States except US): AMERITECH [US/US]; 2000 W. Ameritech Center Drive, Hoffman Estates, IL 60196-1025 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): BOSSEMEYER, Robert, W. [US/US]; 41W091 Colson Drive, St. Charles, IL 60175 (US). LIEBRECHT, Donald, B. [US/US]; 2436 Smalley Court, West Dundee, IL 60188 (US). BENNETT, Raymond, W., III [US/US]; 26 North Webster Street, Naperville, IL 60540 (US). SULLIVAN, Barry, J. [US/US]; 3539 Long Grove Road, Long Grove, IL 60047 (US).</p> <p>(74) Agent: HALLING, Dale, B.; Suite 202, 128 S. Tejon, Colorado Springs, CO 80903 (US).</p>	09/061,833	16 April 1998 (16.04.98)	US	09/096,560	12 June 1998 (12.06.98)	US	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>
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<p>(54) Title: HOME GATEWAY SYSTEM AND METHOD</p> <div style="text-align: center; margin: 20px 0;"> <pre> graph TD 54[PROCESSOR 54] --- 52[SWITCH 52] 52 --- 56[ROUTER 56] 52 --- 50[TRANSCIVER 50] 56 --- 56_ext[] 50 --- 34[INTERNET SERVICE PROVIDER 34] </pre> </div>										
<p>(57) Abstract</p> <p>A home gateway system (20) includes a transceiver (50) connected to a switch (52). A processor (54) is connected to the switch (52) and provides intelligent functions for the switch (52). A router (56) is connected to the switch (52). The router (56) upon receiving a data packet from an internal port where the data packet has an external address, routes the data packet through the switch (52) to the processor (54). The processor (54) directs the transceiver (50) to establish a telephony connection with an internet service provider (34) and sends the data packet to the internet service provider (34).</p>										

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bandwidth channel from the ISP to the home. This allows large amounts of graphical data to be downloaded to the user quickly.

In another embodiment after the telephony connection to the service provider is established, a plurality of data packets are received for transmission over the external connection. The
5 priority of the plurality of data packets is determined. Those data packets having a high priority (high priority data packets) are sent before any low priority data packet are transmitted. In another embodiment the low priority data packets are compressed
10 to form a plurality of compressed data packets. The compressed data packets are then multiplexed with the high priority data packet over the external connection.

In another embodiment the request is an information service provider request. The request can be for traffic, weather,
15 travel or other information stored on a web site. The information may come from the internet or a telephone information system. The user can request this information through his television and in this case the received information is displayed on a channel of his television. The user can also request this information from his
20 computer or his telephone and in that case the information is sent back to the device originating the request. Using the voice processing system it is possible to convert data to voice or voice to data so that any information source can be translating into the appropriate form for the requesting device.

25 FIG. 13 is a flow chart of a method of operating a home gateway system to provide a data telephony connection in accordance with another embodiment of the invention. The process starts, step 240, by receiving a destination number from a

data telephony interface. A telephony connection with an ISP is established at step 244. A message is then sent to the ISP that includes the destination number (DN) at step 246. An audio signal is received and digitized by the home gateway system at step 248.

5 In one embodiment the signal is also compressed. The digitized signal is then packetized to form a plurality of outgoing packets and transmitted to the ISP at step 250. In one embodiment the packets have an associated priority and high priority packets are
transmitted first. The home gateway receives incoming packets

10 (plurality of incoming packets) at step 252. The incoming packets are converted into an incoming audio signal (digital or analog) at step 254. The incoming audio signal is sent to the telephone at step 256 which ends the process at step 258.

FIG. 14 is a flow chart of a method of operating a home gateway system in accordance with one embodiment of the

15 invention. The operation starts, step 270, when a request is received at step 272. At step 274, it is determined if the request is for a switch 276 or a router 278. When the request is for a switch 276, it is determined if the request is for a data telephony

20 connection at step 280. When the request is not for data telephony connection, other standard switch processing is performed at step 282. Standard switch processing can include internal routing of phone calls or routing to the voice messaging system for instance. When the request is for a data telephony

25 connection it is established at step 284.

When a request was for a router 278, it is determined if the request requires an external connection at step 290. When the request does not require an external connection, standard routing

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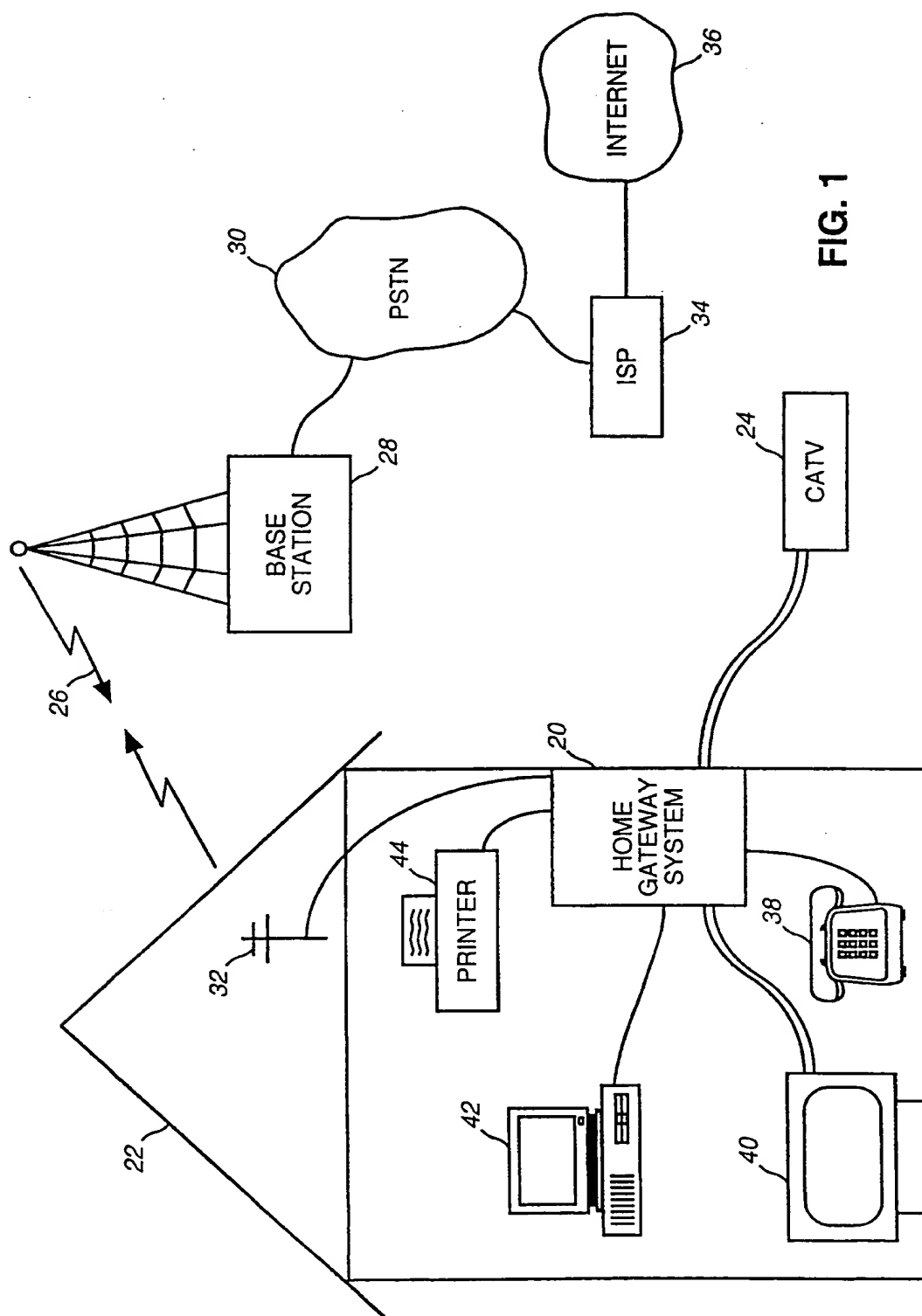


FIG. 1

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